DOE/EH – 0686

Honeywell International, Federal Manufacturing & Technologies/New Mexico (FM&T/NM)

Report from the DOE Voluntary Protection Program Onsite Review, July 12-15, 2004

U.S. Department of Energy
Office of Environment, Safety and Health
Office of Corporate Performance Assessment
Office of Quality Assurance Programs
Washington, D.C. 20585

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"...Some of us will serve in government for a season; others will spend an entire career here. But <u>all</u> of us should dedicate ourselves to great goals: We are not here to mark time, but to make progress, to achieve results, and to leave <u>a record of excellence</u>."

— George W. Bush
President of the United States
October 15, 2001
Constitution Hall, Washington, DC

Contents

Abbreviations and Acronyms

BBS	Behavior-Based Safety
BLS	Bureau of Labor Statistics
DOE	Department of Energy
DOE-VPP	Department of Energy Voluntary Protection Program
ES&H	Environment, Safety and Health
FM&T/NM	Federal Manufacturing & Technologies, New Mexico
IPMD	Integrated Performance Management and Development
JHA	Job Hazard Analysis
OSHA	Occupational Safety and Health Administration
OST	Office of Secure Transportation
PHA	Preliminary Hazard Analysis
PHAD	Preliminary Hazard Analysis Determination
PPE	Personal Protective Equipment
S&H	Safety and Health
VPP	Voluntary Protection Program

Executive Summary

The Department of Energy-Voluntary Protection Program (DOE-VPP) onsite review of the Honeywell International, Federal Manufacturing & Technologies (FM&T/NM), was conducted from July 12-15, 2004, in Albuquerque, NM. FM&T/NM is an operating contractor for the Department of Energy (DOE). The following summarizes the review team's observations and analysis.

Management Leadership

The DOE-VPP Onsite Review Team (Team) found a high degree of management commitment to safety and health (S&H) at FM&T/NM. Responsibilities and accountabilities are well defined and implemented by the management. The Director of FM&T actively participates in safety programs, and has successfully established a relationship of mutual respect and cooperation with associates on all matters relating to safety program implementation. FM&T/NM management believes that all accidents are preventable, and has established goals to achieve "zero injury." Contractor management is excellent. The Team noted that management held themselves responsible and accountable for S&H in the workplace. Top-level management is visible in the workplace, and actively participates in the development and implementation of S&H programs. However, the review team noted that the management had limited success in empowering the associates to take the ownership of the DOE-VPP. The FM&T/NM management believes that the DOE-VPP recognition would be an endorsement of the effectiveness of the ISO 14001 and BSAFE safety program implementation.

Employee Involvement

The Team found that associates strongly expressed their commitment to safety at FM&T/NM. Associates work together with management to implement ISO 14001 and BSAFE programs at FM&T/NM. This involvement not only occurs through their participation in the safety meetings and training activities, but also through safety observation processes. Associates openly stated that they not only felt responsible for their own safety, but also for the safety of their peers. The Team observed that associates are truly involved in the BSAFE program, and a strong safety culture has developed at this site. The review team, however, noted that the associates have limited knowledge of VPP requirements and their responsibilities and authorities under the DOE-VPP.

Worksite Analysis

Members of FM&T/NM work groups participate in preuse/prestart assessments and inspections. Job hazard analyses (JHA) are well developed, communicated and practiced. Associates are encouraged to communicate any unsafe conditions or issues; both oral and written methods are well developed (including an "anonymous" reporting option and "feedback" component); the methods are used by employees throughout the organization. Identified hazards are addressed – with the condition/issue documented, a responder/action assigned, and appropriate corrective actions taken in a timely manner; actions are tracked to completion. Accident investigation

processes are developed and implemented. All sub-elements of this VPP tenet have been in place for at least three (3) years.

Hazard Prevention and Control

FM&T/NM has a well-qualified group of safety and health professionals in the ES&H Services. The Safety and Health Rules, work practices, and usage of Personal Protective Equipment (PPE) were found to meet the requirements of VPP. Preventive maintenance programs were developed, and are effectively used to mitigate the chances of unplanned equipment failure, thereby enhancing safe operations at FM&T/NM.

Safety and Health Training

Associates are trained and qualified appropriate to their job descriptions and responsibilities; associates at all levels knew how to identify and protect themselves and others from hazards associated with their jobs. Training required and completed is documented. Through staff and safety meetings, supervisors reinforce training throughout the year. Associates stated in interviews that the training provided has made them more conscious of health and safety issues in their work environment. Managers and supervisors routinely receive training commensurate with their responsibilities. Safety meetings are held on a regular basis.

Conclusion

The Team concludes that FM&T/NM has satisfied the requirements for participation in DOE VPP and recommends that DOE approve Merit VPP status to FM&T/NM.

To reach Star status, FM&T/NM needs to do the following:

FM&T/NM managers must extend their commitment to a STAR level of quality VPP by establishing a full working daily safety and health partnership with all associates. This partnership encourages the ownership for work place safety and health by associates.. Management must establish the necessary committees, procedures, and communications to exercise, and to continuously enhance an effective associate safety ownership. Sufficient ownership will be measured by the degree of afforded management empowerment and integration of associate influence into the operation of the shared safety and health program.

Associates must be actively involved in the planning, execution, and assessment of the work place safety and health programs. They must have an active and meaningful role along with management to design, develop, implement, monitor, evaluate, and recommend necessary enhancements to all the VPP elements as the owners of the S&H program. They share with management accountability for safe and healthy work performance.

Introduction

The DOE-VPP onsite review of the FM&T/NM was conducted during July 12-15, 2004, in Albuquerque, New Mexico. The operating contractor for DOE is Honeywell International. Honeywell International is a large nationally-based company with a major DOE facility in Kansas City, MO. FM&T/NM has approximately 300 full-time associates working at the Albuquerque facility.

This element of Honeywell International has the primary mission to support the Office of Secure Transportation (OST) as a part of DOE/NNSA and various National Laboratories (Sandia National Laboratory, Lawrence Livermore National Laboratory, Los Alamos National Laboratory), by designing, manufacturing, and procuring electronic, electromechanical, and mechanical equipment. Work is primarily performed in and around the Kirtland Air Force Base in Albuquerque, New Mexico. FM&T/NM has an additional workplace in Los Alamos. Besides manufacturing related service, FM&T/NM also performs Learning Technologies development, including computer-based training and knowledge preservation work at Los Alamos and at Sandia.

FM&T/NM supports OST by repairing and preparing vehicles for use on public roads. They further provide engineering and manufacturing support to modify other support vehicles, with associated training support. This includes the MILES equipment support with an armory of weapons suitable for training use.

They also provide non-OST support for the laboratories for software development in safeguards and security and other light manufacturing.

Most of the associated safety hazards are common to general industry such as fire, electrical, production, development and non-production chemicals, explosives, and natural phenomena.

The Team evaluated the safety programs of FM&T/NM against the requirements of the DOE-VPP. The DOE-VPP onsite review team (Team) consisted of safety professionals from DOE Headquarters, DOE – Kansas City, MO, and from the Waste Isolation Project in Carlsbad, NM. (See Appendix for a roster of the Team and the areas of assigned responsibilities of the team members). During the site visit, the Team evaluated relevant safety documents and conducted interviews to evaluate and verify the information submitted by the FM&T/NM VPP application.

II. Injury and Illness Rate Information and Trends

A review of the Occupational Safety and Health Administration (OSHA) 200/300 logs was made. The rates below include subcontractor and instructor hours and injuries:

INJURY AND ILLNESS DATA FOR FM&T/NM					
Calendar Year	Lost Workday Cases	Total Recordable Cases	Employee Hours	Lost Workday Case Incident Rate	Total Recordable Case Incident Rate
2001	2.	4	540885	.72	1.46
2002	0	4	500833	0.00	1.43
2003	1	4	576663	0.35	1.39
3-Year Average	1	4	539460	0.36	1.43
Bureau of Labor Statistics (BLS) average for SIC 9711				3	N/A
percent below BLS rate				.88	N/A

The information on the OSHA 200/300 logs supports the data provided in the application, the organization's first report of injury forms and other recordkeeping documents. BLS information for this activity for SIC comparison is not available (N/A) for total recordable case incident rates.

III. Management Leadership

An evaluation of the applicant's performance in Management Leadership is addressed and described below.

A. VPP Commitment

Management commitment is critical to the successful implementation of the DOE-VPP. FM&T/NM management has implemented a number of well-integrated safety management systems. This level of commitment is reflected in continuous immediate accessibility of all managers to the principle work areas of the site. The employees, almost without exception, indicated that they were able to communicate both formally and informally with all of their managers at any time for any safety issue, and rely on their managers to act upon those concerns

The FM&T/NM managers are involved at every level, and show their commitment to worker safety by helping to identify the worksite hazards and reduce the risk of injury and illness to employees. Management also provides the necessary training and financial resources, as well as an open door policy.

The commitment to Health, Safety, and the Environment as a core business value to ensure compliance is stated in FM&T/NM's Operating Policy. Specific components include, "Protecting the safety and health of our associates by integrating safety and environmental protection into our business processes." This policy is communicated to employees at all levels through All Associates meetings, monthly safety meetings, and posters. Site-specific ES&H requirements implementing these policies are set forth and communicated to associates through Command Media (electronic access) via the site-wide intranet computer system. Interviews indicated that employees do understand the priority of S&H protection in relation to other organizational values, though none stated that safety was the first consideration, all maintained that safety is a primary focus.

The calendar year 2004 Goals, related to safety included a Quality Objective of "Being Accident Free," and a BSAFE Objective Goal to "Increase Safe Behaviors & Reduce At-Risk Behaviors."

Associates interviewed readily indicated that management is actively involved in worker S&H, including some managers participation in the BSAFE program as "observers." They also reflected that top management is readily accessible to them for S&H concerns, and that such concerns receive high priority in resolution.

B. Leadership

The Senior Leadership Review process has established quarterly walk-throughs by senior managers of their areas. These reviews facilitate management's commitment, reinforces associates awareness, and fosters safe behaviors in workplaces. Additional reinforcement is provided by the recognition and rewards process. Monthly ES&H Executive Committee meetings, an Environmental Self assessment program, a Behavior Safety For Everyone program, a Near Miss program, a Job Hazard Analysis program (JHA), and a Preliminary Hazard Analysis (PHA) Program are further demonstration of FM&T/NM management commitment.

Though management is committed to safety overall, management leadership in the actual implementation of the VPP Program does not meet the level of potential reflected in their commitment and implementation of programs such as the BSAFE and ISO 14001. This may be due to lack of in-depth knowledge of VPP Program areas that are cultural-based rather than written requirements that reflect compliance only orientation. This is also reflected in associates' limited knowledge of the VPP Program. A Star level culture would be more fully reflected in involving employees in all aspects of safety program management, including areas such as development of programmatic goals and decision making, and associates driving the programmatic implementation of VPP.

C. Organization

FM&T/NM is organized to support its roles, responsibilities, and policies. The Director bears the chief accountability and responsibility for the ES&H operations. The ES&H Services is charged with establishing, implementing, and operating all ES&H programs to ensure compliance and safe operations. Through review and observation of these processes in action, the review Team is assured that the safety organization functions effectively.

D. Responsibility

Top management at FM&T/NM is prominently involved in all elements of the ES&H program execution, and they are committed to the implementation of a well-coordinated ES&H program, including establishing a clear line of communication with employees. They subscribe to the philosophy that line management is responsible for safety.

They have clearly defined the roles, responsibilities, accountabilities, and authorities for S&H. Managers have been clearly made responsible for safety at all of their facilities. Associates are responsible for performing their work in a safe manner for themselves, their coworkers, and for the general public. Managers ensure that associates are properly trained and equipped. Associates are expected to comply with all regulations, and to assist in the identification and correction of safety problems.

ES&H Services with the technical expertise, including a variety of disciplines such as industrial hygiene and fire protection, are available to achieve excellent performance. They identify and determine applicability of requirements; develop and assist with program operations; assess potential hazards; assist with development and implementation of controls; and participate in assessments and in continuous improvement activities.

The Command Media Process Description and Work Instructions and Job Hazard analysis are the principle means of communicating requirements to associates. Additional communication means include: Resource Allocation in budgets, various organization-wide communications media using intranets, periodic all associates meetings, assigned management programmatic requirements, and individually assigned job descriptions.

Interviews with managers reflected that they clearly understand their S&H responsibilities, and were aware of the potential hazards their employees might be exposed to.

E. Accountability

Management is committed to providing the leadership, direction, goals, training, resources, and standards to assist employees in the performance of their duties in a safe and healthful manner. Management and associates share the responsibilities to carry out individual duties in a safe manner. Their formal performance appraisal system, the Integrated Performance Management and Development (IPMD) Process, with S&H responsibilities is a critical element for safety accountability. Effective IPMD examples included objectives such as support of ISM implementation, performing BSAFE Observations, and membership on the FM&T/NM Continuous Improvement Committee. Though obvious that the commitment to safety is expected, there was no clear indication of all management being required to have a safety-related objective. One enhancement might include ensuring that a safety-specific component is added to the Honeywell Behaviors section of the IPMD form, at least for management.

ES&H Services functions as a technical resource and oversight. Likewise, the STRAP, the Strategic Plan is the key plan to ensure continuous improvement. It keeps a common focus on the customers, the elements of growth, the quality in performance and the vitality of the workforce culture.

S&H requirements are communicated via the ES&H Process Descriptions and Work Instructions. The BSAFE implements their behavior-based safety program. An Associate Recognition program is in place for rewarding good safety performance.

F. Authority and Resources

This review indicated that the system utilized is effectively working. The Director has the ultimate responsibility with the assistance of his line managers. More involvement of associates and empowerment by management, with the authority to address and correct safety concerns rather than simply report, would be expected for a Star site.

The ES&H Services organization has a staff of five safety professionals. These include: a Safety engineer/industrial hygienist, an emergency management specialist, an administrative analyst/hazardous materials control system administrator, an administrative analyst/safety and health systems administrator, and an ES&H manager/environmental protection specialist.

Likewise, there is a significant investment in a Behavior-Based Safety Program (BBS).

Additionally, FM&T/NM has assigned a budget of $275,000 out of $5.4 M for the total facility. The ES&H Services has about $260K budget with $100K dedicated to Sandia medical support.

The ability to invoke the use of “stop work authority” has been clearly communicated to the entire staff, along with the understanding that any perceived repercussions would not be tolerated. Likewise, top management maintains an “Open Door” policy that rarely is used because managers are typically both very available and highly responsive to individual employee safety issues/concerns. Several employees quoted specific examples where they had stopped work within the previous few weeks to allow a review for determination of safer approach to the task, or to remove hazards before proceeding.

G. Planning

The planning process requires managers to analyze and plan for ES&H, and is addressed through the FM&T/NM 5 Year Strategic Plan and the Annual Strategic Plan, operational costs for doing business. These institutional safety plans helps capture long-term goals, capital expenditures, and short term S&H continuous improvements. An integrated planning framework has been established to provide a comprehensive template to ensure the planning process is comprehensive.

H. Contract Workers

Contractors are required to use the same processes and follow the same rules. "Contractor ES&H and Security Guidelines" provide the primary guidance for contractors. FM&T/NM reviews the safety performance history of all contractors before a contract is awarded. Periodic inspections of contractor work activities are routine. Violations of S&H procedures result in immediate work stoppage and possible contract termination.

I. Program Evaluation

This area of Management Leadership presents an opportunity for FM&T/NM to enhance their programs and drive a feedback and improvement, and corrective actions process that will serve as a valuable tool to take safety to the next level of excellence. With the management review's safety focus during the last two reviews focused on environmental policy commitments and the BSAFE program, it did not appear to meet the expectations of an annual ISM review, nor of a VPP review. Significant focus has been placed on the BSAFE Observations serving as safety "self-assessments." Though they are, this is a focus on behavioral aspects, which is a small portion of the full spectrum of required S&H self-assessments. Quality Surveys are conducted by the QA organization to determine the effectiveness of the QA program implementation. Though they are effective and identify safety related issues such as programmatic training concerns, they do not meet the level of expectations of DOE Policy 450.5 for an ES&H self-assessment program. The newer ESAP program provides an exemplary methodology for addressing environmental concerns, and some aspects of safety assessments. However, a thorough determination of all assessment requirements, with subsequent programmatic development of a S&H assessment program to meet those requirements needs to be conducted. Once this program is developed, it would be anticipated that the results of these evaluations and other S&H trending data would be used to develop goals and objectives for the coming year.

Corrective actions, currently identified through various processes such as QA audits, management reviews, ESAP program, and BSAFE observations, are formally tracked and appropriately addressed.

J. Site Orientation

FM&T/NM provides site orientation for both visitors and for new associates. These orientations consist of a general orientation and a brochure.

Visitors are oriented to security, S&H, emergency evacuation, and general organizational information. New associates receive a comprehensive "ES&H Orientation for New Employees" course with a broad range of subject areas. Handbooks are also provided both for associates and contractors.

K. Employee Notification

The employee notification program surpasses the requirements for employee notifications contained in DOE Orders and guidance documents, and these requirements exceed the OSHA (Federal and State) requirements for employee notification. FM&T/NM adopts a number of communication mechanisms designed to appeal to the diverse population.

The Director and other managers have clearly accepted responsibility for the safety of their associates, and the operations under their control by establishing ES&H policies. The management is fully committed to achieving a safe and accident-free work environment.

Employee notification elements in the VPP criteria include ensuring that all employees are aware of the participation in the DOE-VPP, their right to express concerns related to occupational S&H to DOE, and their right to receive the results of self-inspections and accident investigations upon request. During the interviews, it was revealed that most employees were not aware of these aspects, and except for awareness that the VPP application had been submitted and a subsequent review was in process, they had no knowledge of the VPP program, its benefits, related expectations, etc.

L. Management Visibility

Top-level management is clearly visible and actively participates in the S&H program. Management regularly participates in various S&H activities, such as serving as observers in the BSAFE program. Managers are held accountable for their S&H responsibilities and maintain a policy of accessibility with regard to S&H issues that arise in the workplace. An "open door" policy ensures that any associate at any time can express a safety concern to any level of management. The Team confirmed this policy through formal and informal interviews, and noted that most employees did not feel the need to raise concerns above their first-tier or immediate supervisor, because concerns were resolved almost immediately.

M. Conclusion

The Team found strong management commitment to safety, and evidence of active involvement of management to achieve a safe working environment for employees. However, this tenet and its sub-elements remain unfulfilled, and can serve as goals in assisting FM&T/NM to meet the Star level of the VPP program.

FM&T/NM managers need to extend their commitment to a STAR level of quality VPP by establishing a full working daily safety and health partnership with all associates. This partnership encourages the ownership for workplace S&H by associates. Management establishes the necessary committees, procedures, and communications to exercise and to continuously enhance an effective associate safety ownership. Sufficient ownership will be

measured by the degree of afforded management empowerment and integration of associate influence into the operation of the shared S&H program.

IV. Employee Involvement

The onsite review indicated that associates are actively engaged in the BSAFE portion of the S&H program, and related aspects of Six Sigma. However, review of program documents, and the results of interviews showed that management has not fully empowered associates to proactively own the S&H program at this site. Commitment between management and associates to provide a safe workplace is evident at all levels. The level of familiarity with the purpose and benefits of VPP, and involvement of the associates were not demonstrated to the level that would be desired at a VPP Star site.

A. Degree and Manner of Involvement

The information gathered for this portion of the report relies heavily on observations of associates in the workplace, while conducting their routine duties, and on both formal and informal interviews of approximately 1/3 of the associates and managers from all work areas. Per the VPP Star criteria, employees at all levels must be involved in the structure and operation of the health and safety program, and in decisions that affect employee health and safety. Associates feel they own the BSAFE and Environmental portions of the ES&H culture. In addition Associates are involved in related continuous improvement programs, such as the various Six Sigma initiatives. However, due to the commitment of management to safety and feeling "responsible," most of the safety program is management driven. While this does provide an excellent safety program for FM&T/NM, the highest level of excellence in safety culture is achieved in employee driven processes.

Associate participation expectations are in addition to each employee's individual right to notify appropriate managers of hazardous conditions and practices. Associates at all levels expressed that they were comfortable raising safety concerns. No barriers to communication with management when it comes to S&H were identified. Associates were candid and showed no fear in talking with the VPP review team during interviews. All employees indicated that they understand their rights and responsibilities, and are very knowledgeable about their responsibilities regarding S&H overall, though were not aware of the VPP specifics. Interviews confirmed that a strong safety culture exists at all levels, and employees feel empowered to voice safety concerns. All associates interviewed (formally and informally) strongly expressed their readiness to stop work if they felt conditions were unsafe, and their belief that management would support the action. Many associates were able to give examples of when they intervened after observing an unsafe act or condition, and most felt that their interventions were positively received.

Most employees were familiar with efforts to continue to improve safety programs. The managers, including the first level supervisors, understood the purpose of VPP, but this same level of understanding was not shown to flow down through all of the associates. Many stated that they were given timely and complete written and/or oral feedback to S&H questions and issues, such as the on-line access to the Near Miss program, allowing them to follow up and see what corrective actions were taken.

Overall, it was clear that the work force has enthusiastically welcomed the opportunity for increased participation in all aspects of the organization. They indicated that the company's

efforts have kept safety in the forefront. Many workers indicated that the effort has moved the FM&T/NM safety programs to a higher level. Some comments made during the interviews were:

"The associates see the benefits of being safe."

"The associates will not hesitate to come into my office with a concern."

"This is one of the best safety environments I've worked in."

"Money is not an issue, safety is the biggest issue."

"I appreciate what the company does for safety."

B. Safety and Health Committees

Safety and Health Committees at this site include:

- Safety Process Steering Committee – (SPSC)
- BSAFE Steering Committee
- Electrical Authority Having Jurisdiction (EAHJ) team
- Explosives Safety Committee
- Various teams for Six Sigma initiatives

For a site to meet the expectations of a VPP Star program, a safety committee meeting VPP criteria is expected to be the major driver of the site's S&H program. This would include a joint management/associate membership reflective of the site's populace, with associates rotated through membership frequently enough that all such personnel receive experience on the committee over a reasonable period of time, while having terms long enough to develop sufficient expertise to be of assistance (such as the BSAFE Steering Committee). The S&H committee should conduct hazard assessments that cover the entire worksite periodically (but not limited to behavioral observations). In addition, the committee could be expected to plan and conduct health and safety awareness programs, and be the vehicle for VPP program development, implementation, and oversight. A committee meeting these specific expectations is not currently in place.

C. Conclusion

Associate ownership has taken root in some forms throughout this worksite, particularly through the BSAFE program. This creates an opportunity whereby management can create ownership of the program throughout the complex. The associates are proud of their worksite and feel safety is integral to maintaining a world class organization. However, FM&T/NM does not meet all the requirements for the employee involvement tenet. The opportunities for improvement in this area can serve as goals for achieving the next level of safety excellence.

Associates must be actively involved in the planning, execution, and assessment of the work place S&H programs. They must have an active and meaningful role – along with management – to design, develop, implement, monitor, evaluate, and recommend necessary enhancements to all the VPP elements, as the owners of the S&H program. They share with management accountability for safe and healthy work performance.

V. Worksite Analysis

The worksite analysis processes across FM&T/NM are structured and implemented according to disciplined core functions and guiding principles; these processes adequately identify hazards to the workers, the environment, and the public. Formal worksite analysis processes for control of operations and the mitigation of hazards or potential hazards are in place. Personnel interviewed during this review, and observations made by the Team, confirmed that these processes are used and understood throughout the organization. These processes have been in place for at least three years. Description of the processes and activities for worksite analysis are presented below.

A. Pre-use/Pre-startup Analysis

New or modified facility designs, operations, and processes are reviewed and analyzed to identify and mitigate potential hazards before work is started. New and modified equipment must meet requirements for safety (e.g., guarding, electrical safety, noise levels, etc.) using the Preliminary Hazard Analysis (PHA). The line manager in charge of a new or modified process is required to fill out a Preliminary Hazard Analysis Determination (PHAD) checklist, which S&H then reviews and concurs with, if acceptable. This checklist is the initial screening to determine if a PHA is required. Before beginning the work, line managers ensure that the risks and hazards are controlled as specified in the work plan and PHA.

Additionally, a series of other reviews that are performed include the JHA, the Beneficial Occupancy Inspection, and the Hazardous Material Review.

Interviews and records reviews demonstrated that S&H professionals are routinely involved in this process. Examples of the PHAD checklists were reviewed, and interviews with the S&H professional and maintenance work planner highlighted the process and its effectiveness.

B. Comprehensive Surveys

Comprehensive hazard reviews are completed. These reviews provide the basis for a number of DOE-prescribed activities. Among these are: new process development, facility chemical hazard evaluations, noise surveys, exposure surveys, and general worksite walk downs. Many support emergency preparedness, development of industrial hygiene monitoring plans, assessment of physical requirements and working conditions, and other work purposes. These reviews provide both a narrative description and a checklist/matrix; the survey identifies physical and environmental hazards. Routine exam and analysis of hazards associated with the individual jobs is exemplified in the extensive ergonomic surveys that are conducted.

C. Self-Inspections

Inspections are documented on forms developed by ES&H. Non-compliances and issues are documented, and actions are tracked to completion. The inspection process is well defined, and includes such routine activities as the Environmental Self Assessment Program (ESAP), management reviews, BSAFE observations, and Beneficial Occupancy Inspections.

Results from the inspections are analyzed to produce information useful to improve performance and prevent recurrence of negative issues.

D. Routine Hazard Analyses

All work performed by associates – including training, travel, general office, laboratory, construction (performed by contractors), maintenance work, emergency response, etc. – has been analyzed, and control measures defined using one of the hazard analysis methods; PHA, JHA, etc. This process is fully described in the FM&T/NM ES&H documents.

When routine tasks are performed, provided the safety conditions have not changed since the JHA was last reviewed/approved, the JHA can replace the need to complete another hazard evaluation. This allows routine activities, such as normal maintenance, to proceed without additional hazard analysis. However, for those activities involving activities not previously analyzed, activities involving changed/changing conditions, a PHA or JHA is required.

It was noted that pre-job briefings are held for new and revised JHAs – as well as many routinely performed activities that involve a higher level of risk

E. Employee Reporting of Hazards

Associates are encouraged and expected to identify and report, without fear of reprisal, any unsafe conditions. This statement was strongly communicated to the Team during interviews of associates and manager/supervisors. Most associates stated they have no problem communicating a concern or comment.

Three basic methods for communicating hazards and concerns are fully developed and implemented throughout FM&T/NM:

- Verbal reporting to the immediate line manager or S&H representative
- Imminent danger by calling 911
- On line by intranet

The associates need to be informed of their right to communicate a concern to the DOE, either in writing or by telephone.

Associates stated they felt that any of these systems can be used to report an “imminent danger” situation (though they unanimously said they’d use the verbal method to their immediate supervisor/manager); no one could recall an imminent danger situation. Of additional significance is that no associate expressed a personal fear of reprisal if they reported a safety concern, nor did any associate relate an instance where they had heard of such a situation.

Associates stated that they felt comfortable intervening when seeing another associate working in an unsafe manner. This is in addition to the BSAFE program that uses direct observations – indicative of a culture that promotes safety.

F. Accident Investigations

FM&T/NM uses a risk-based system, documented in their ES&H procedures, to investigate accidents and incidents.

ES&H representatives are responsible for formal accident investigations, which result from injuries/illnesses and/or property/vehicle damage incidents. ES&H staff members conduct the investigations of significant events, and ensure that root causes are properly evaluated and addressed. All OSHA-recordable incidents are reported to FM&T/KC, and subject matter experts at FM&T/KC are used when needed. All accidents/injuries and the required investigations are reviewed weekly by the SPSC. The minutes from these meetings are shared with all of the associates so they are aware of the actions being done, some of which are the result of accident investigations.

Examples were reviewed by the Team. Root causes are identified for events that are reportable to DOE (including recordable injury/illness events).

The "Near Miss" program relies on associates to identify and input incidents that are not of enough significance to be reported through the occurrence reporting process. While it appears that the Near Miss reporting system is working well for encouraging associate input, it is still relatively new and being modified to include first aid-type injuries/illnesses. The system should continue to grow and be improved so that useful trending data can be generated to determine if precursors to potential incidents can be identified.

G. Trend Analysis

S&H performance and trending data of occupational injury/illness statistics is developed from the database, and presented monthly at the ES&H Executive Safety Committee meeting. This information is also posted on the ES&H website. The VPP criteria is that trend analysis must be conducted for all data accumulated under the health and safety program, including injury/illness statistics, inspections, and employee reports of hazards to help identify systemic problems that may not be noticed when only isolated incidents are considered.

However, FM&T/NM did not appear to have the broad, comprehensive approach necessary to assist their continuous improvement efforts. The addition of the first aid data to the Near Miss system as discussed in the previous section will allow for more effective tracking and trending in the future.

H. Conclusion

Worksite analysis methods are effective in addressing the hazards for existing and new hazards. FM&T/NM meets all of the requirements of the Worksite Analysis tenet, except for weaknesses in trend analysis, which are being addressed, and its sub-elements as described above.

VI. Hazard Prevention and Controls

The level and complexity of the hazard prevention and control program found at FM&T/NM meets DOE-VPP criteria. Sub-elements of this tenet are addressed and described below.

A. Professional Expertise

FM&T/NM has a well qualified group of S&H professionals. They operate from the ES&H Services organization. Several hold academic degrees and safety certifications.

B. Safety & Health Rules

FM&T/NM has strong S&H rules in the hierarchy of policies, procedures, and ISM plans. The Associates Handbook can be found on the Human Resources Web Page and states that "everyone must follow the EH&S regulations and work rules." Site-specific rules are also available and communicated to associates. The rewards and recognition/disciplinary program reinforce these rules. Hazards at this site are controlled using engineering controls, PPE, JHAs, and checklists. Site safety rules, work practices, and usage of PPE were found to meet requirements.

Hazardous materials are reviewed by the ES&H Service organization before procurement, and the use of the "chemical jail" has declined due to successful use of the required hazard analyses when introducing a new chemical to the site. Material Safety Data Sheets (MSDSs) are maintained on the intranet for the appropriate areas.

Contractor work is monitored by associates to verify that it is performed as planned and in accordance with requirements.

S&H rules are used to guide and enforce/reward conformance to policies and requirements. A hierarchy of positive reinforcement is available and used by management to reward proper and exceptional behavior.

Overall, the Team found that S&H rules are followed by all associates, including contractor employees. Interviews with associates indicated they know and understand the disciplinary process, should these rules not be adhered to. Those interviewed felt this process was both fair and consistent, and gave examples of positive and negative reinforcement received from supervisors and management for good or poor work practices.

C. Personal Protective Equipment

Site policy regarding the use of PPE is established in procedures. A variety of personal protective equipment is made available including gloves, boots, safety glasses, hearing protection, and respirators. Where PPE is needed, requirements for its use are integrated into JHAs. Some truly innovative modifications have been made to reduce the hazards for individual systems, particularly a cutting function that is routinely used by the communications staff.

Few staff require respiratory protection, but there is a strong program for medical evaluation, respirator fit testing, and training for respirator users.

Awareness of hearing conservation was noted as a concern by multiple employees. While it was clear that the noise levels, particularly at the Craddock facility, are below the OSHA limits, consideration should be given to maintaining associates in the hearing conservation program, even if not required.

D. Preventive Maintenance

FM&T/NM has implemented a comprehensive Preventive Maintenance (PM) program as addressed in Command Media Process Description 14.01.05.00. This system is operated through the computer system MAXIMO, and administered by the KO Facility Services Maintenance Planner. The MAXIMO system includes equipment identification, preventive maintenance requirements and schedules, hazard information and controls, and maintenance records.

E. Emergency Preparedness

The ES&H organization provides an emergency management program to support the facility. FM&T/NM response consists of the Emergency Response Specialist and the Emergency Action Team. Associates participate in drills and exercises, as scheduled, with the key hazards including chemical hazards, explosives hazards, and natural phenomena.

F. Radiation Protection Program

Not applicable.

G. Medical Programs

FM&T/NM contracts with the Sandia National Laboratory Medical Department for its medical services. These services include evaluation and treatment, preventative and wellness programs, and general health support for associates. Consideration should be given to addressing the issue with new and existing employees in advance to allow FM&T/NM access to medical data related to work place injuries.

FM&T/NM uses a contractor to conduct reviews of associates to address ergonomic issues. The reviews are on-going, and help the associates identify any "aches or pains" before they become significant. The relationship between the contractor representative and the associates appeared to be very comfortable, and the contractor feels that the associates are very comfortable with letting her know if they are experiencing any discomfort.

H. Occupational Safety and Health Programs

The policies and procedures at FM&T/NM are based on appropriate DOE contract clauses, orders, contract requirement documents, and industry standards. Site-wide procedures are written

and maintained by the ES&H organization to address worker health and safety requirements. Organizational plans reference applicable procedures and other documents to provide a clear and integrated communication of occupational S&H programs for managers and staff members. The hazards and hazard mitigation for specific activities are addressed by Job Hazard Analyses, or other documents such as Health and Safety Plans. The procedures, JHAs, and other documents appropriately translate requirements and best practices into working level guidance.

I. Conclusion

The Team did not identify any major weaknesses in the area of Hazard Prevention and Control. FM&T/NM meets all of the requirements of this tenet and its sub-elements as described above.

VII. Safety and Health Training

The S&H training processes used by FM&T/NM are structured and implemented core functions and guiding principles; these processes adequately train workers and associates in recognizing hazards, and performing their work safely. Associates, who were interviewed during this review, as well as observations made by the Team, confirmed that these processes are used and understood by associates throughout the organization. The onsite review clearly showed that they have the processes effectively developed, communicated, implemented, and self-assessed to meet the tenet of safety & health training. These processes have been in place for at least three (3) years. Description of the processes and activities for safety & health training are described below.

Training for VPP itself is also a weakness. FM&T/NM had self-identified some systemic weaknesses in training related to the determination of training requirements. Currently the individual manager decides what training his/her staff needs; however some customers require varying levels of training to meet their requirements. A Learning Strategy project to improve the learning plan to ensuring these needs are met is in process. Though being developed based on the identification of a unique aspect, the formalization of the process of training requirement identification will be an asset in helping FM&T/NM reach the VPP STAR level of training program expectations.

A. Associates

Processes are in place that formally define the training required, and assure completion for associates and manager/directors. The Team confirmed – through interviews, observations, and document reviews – that each associate receives training commensurate with their job description, responsibilities, and authority. All training provided has a "knowledge check" (test) associated with the course – a feedback loop in the "knowledge check" for incorrect responses reinforces learning.

Orientation for new associates includes all general ES&H training that is necessary for the individual to safely perform their job assignment. In addition, each line manager is responsible for determining additional training requirements, based on the JHA, for the tasks that each employee will be performing.

Since the facility is not a nuclear facility requiring the more formal training processes directed in DOE O 5480.20A, many of the training programs are basic OSHA-based, compliance-oriented training to ensure appropriate employee protection in areas such as the use of PPE, Lockout/Tagout training, hoisting and rigging, etc. In addition, all associates receive foundational behavior-based safety training, with a significant number of associates receiving more advanced training in conducting observations. Honeywell FM&T/NM also has supported a significant amount of Six Sigma training, with all exempt associates reaching at least a "Green" Belt level, and several advancing to a Black Belt. One associate is also certified as a "Lean" Expert to assist in continuous improvement initiatives. In addition, new associates are oriented to the ISO related operating policies as part of their initial training checklist.

On-the-job type training is a basic "mentoring" program to ensure risks specific to a particular task are recognized, and skills sufficient to safely perform the task before operating the particular piece of equipment or conducting the task alone. This was exemplified in the Machine Operation and Safety Evaluation System (M.O.S.E.S.) project, a cross-functional team formed to review and revise the safety rules for approving management staff to use machine tools. The resultant "qualification" process is now formally part of the "on-the-job" type of training being conducted. All associates interviewed felt that they had received sufficient training to ensure knowledge of the hazards to which they were exposed, use of the appropriate controls, and awareness of the actions to be taken if those controls failed.

Employees interviewed reported that they are taught how to protect themselves and others from the hazards of their jobs with a significant focus on the BSAFE program training. There was evidence from observation, documentation, and interviews that where PPE is required, employees understand the need for it, and demonstrate that they know how to use and maintain it. However, there was a heavy focus on compliance level requirements, versus defense-in-depth, such as in hearing protection that might indicate additional training would be useful for "voluntary" usage of PPE or even "expected" usage of PPE at levels appropriate to VPP STAR expectations.

B. Line Managers

The managers take Six Sigma training, which includes a specific safety segment, and the Six Sigma program, providing a useful tool to managers for continuous improvement in safety in accordance with the Feedback and Improvement expectations of the Integrated Safety Management System. The subject matter experts in S&H determine whether formal or informal training is necessary for management. Other management training includes the behavior-based safety training for management, as well as a focus on hazardous materials and waste through the ISO 14001 program, and appropriate management skills training such as creative problem solving to provide management the knowledge needed to ensure a safe work environment for their staff.

Line Managers interviewed indicated that they had been given sufficient training in proportion to their authority and responsibilities for employee safety. They were able to describe their S&H responsibilities, and were able to appropriately describe the hazards associated with jobs under their supervision, and the potential adverse effects on employees. Though managers were aware of their overall responsibilities related to general safety program responsibilities, they were not aware of their specific VPP responsibilities in the category of Management Leadership, and had not received any training related to VPP programmatic aspects. Knowledge of those aspects might be demonstrated through improved defense-in-depth engineering and administrative controls versus the current focus on requirement compliance level controls.

C. Senior Managers

Senior Managers' safety-related training needs are determined by the ES&H professionals. Senior Managers have maintained awareness and involvement in the BSAFE program and Six Sigma through formal training, with information sharing as the approach for other training needs. Information sharing is still formally tracked through meeting minutes, such as the monthly ES&H Executive Committee meeting.

D. Conclusion

Once the Learning Plan, including VPP training is fully developed and implemented, it should sufficiently address the weaknesses in the area of S&H training, and meet all the requirements of this tenet and its sub-elements as described above.

VIII. Conclusion

Though management remains committed to safety overall, management leadership in the actual implementation of the VPP Program has not met their full potential. This may be related to a lack of in-depth knowledge of VPP Programs. This is also reflected in associates' limited knowledge of the VPP Program. A Star level culture would be more fully reflected in involving employees in all aspects of safety program management, including areas such as development of programmatic goals and decision making, and associates driving the programmatic implementation of VPP.

The Team recommends Merit VPP Status for FM&T/NM.

Appendix: Review Team Areas of Responsibility

Name	Organization	Areas of Responsibility *
Rex Bowser	DOE/EH	Team Leader/all VPP elements
Pranab Guha	DOE/EH	Assistant Team Leader/all VPP elements
Catherine Karney	DOE/KCO	All VPP elements
Bertha Cassingham	WIPP/TRU	All VPP elements